

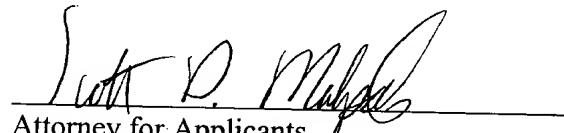
Claims 1 and 4 were rejected on prior art grounds under 35 U.S.C. §102.

Without conceding the propriety of these rejections, and in the interest of advancing prosecution, Claims 1 and 4 have been cancelled. These rejections are thus deemed to be moot and should be withdrawn.

Accordingly, as all of the remaining claims are allowed, this case is submitted to be in condition for allowance.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



Attorney for Applicants
Scott D. Malpede
Registration No. 32,533

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

SDM:mm

DC_MAIN 109195 v 1

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO SPECIFICATION

The paragraph starting at page 4, line 7 and ending at line 18 has been amended as follows:

1. When a user of the projection type display apparatus has inserted or removed the dichroic filter into or from the optical path, it is possible for the user to recognize whether the apparatus is in the color-purity-emphasized mode or the brightness-emphasized mode[, whereas, when,]. However, if after this user has inserted or removed the dichroic filter, another user uses the projection type display apparatus[, and] to display an image from which it is difficult to recognize whether the apparatus is in the color-purity-emphasized mode or the brightness-emphasized mode [is being displayed], the apparatus might be used in a state not suited for the purpose of use of the other user.

The paragraph starting at page 5, line 11 and ending at line 18 has been amended as follows:

In a first aspect of the present invention, there is provided a display apparatus of the type which forms a color image by modulating a plurality of lights, different from each other in color, by one or [a plurality of] more display elements[, the]. The display apparatus comprising means for obtaining a plurality of different display forms by changing the color purity of at least one of [said] the plurality of [colors] lights, and means for supplying information on the display forms.

The paragraph starting at page 5, line 19 and ending at page 6, line 7 has been amended as follows:

In a second aspect of the present invention, there is provided a display apparatus of the type which forms a color image by modulating a plurality of lights, different from each other in color, by one or [a plurality of] more display elements[, the]. The display apparatus comprising means for changing the color purity of at least one of said plurality of lights by inserting or extracting a wavelength selection element into or out of the optical path of at least one of said plurality of lights or changing the attitude of the wavelength selection element, and means for supplying information as to whether the wavelength selection element is in the optical path of [said] the at least one [color light] of the plurality of lights or information on the attitude of the wavelength selection element in the optical path of [said] the at least one [color light] of the plurality of lights.

The paragraph starting at page 6, line 19 and ending at page 7, line 3 has been amended as follows:

In a fifth aspect of the present invention, there is provided a display apparatus of the type which forms an image by modulating light by one or [a plurality of] more display elements, [said] with the display apparatus comprising cooling means for cooling the display elements and means for varying the quantity of light impinging on the one or [a plurality of said] more display elements[, wherein the]. The cooling capacity of the cooling means with respect to

the one or [a plurality of said] more display elements is varied according to variation in the quantity of light.

The paragraph starting at page 7, line 4 and ending at line 15 has been amended as follows:

In a sixth aspect of the present invention, there is provided a display apparatus of the type which forms a color image by modulating a plurality of lights, different from each other in color, by one or [a plurality of] more display elements[, the]. The display apparatus [comprising] comprises cooling means for cooling the display elements and means for obtaining a plurality of display forms by changing the color purity of at least one light of [said] the plurality of lights, wherein the cooling capacity of the cooling means is varied with respect to the display elements modulating said at least one of said plurality of lights according to variation in the color purity of at least one of said plurality of lights.

The paragraph starting at page 7, line 16 and ending at page 8, line 7 has been amended as follows:

In a seventh aspect of the present invention, there is provided a display apparatus of the type which forms a color image by modulating a plurality of lights different from each other in color by one or a plurality of display elements[, the]. The display apparatus [comprising] comprises cooling means for cooling the display elements and means for varying the color purity of [said] at least one light of the plurality of lights by inserting or removing a

wavelength selection element [in] into or from the optical path of the at least one [of said plurality of lights] light or varying the attitude of the wavelength selection element[, wherein the]. The cooling capacity of the cooling means with respect to the display elements modulating said at least one light is varied according [as] to whether the wavelength selection element is in the optical path of said at least one light or not or according to variation in the attitude of the wavelength selection element in the optical path of said at least one light.

The paragraph starting at page 8, line 18 and ending at page 9, line 11 has been amended as follows:

In a tenth aspect of the present invention, there is provided a display apparatus of the type which forms a color image by modulating a plurality of lights, different from each other in color, by one or [a plurality of] more display elements[, the]. The display apparatus comprises air-cooling means for air-cooling the display elements, means for varying the color purity of [said] at least one light of the plurality of lights by inserting or removing a wavelength selection element [in] into or from the optical path of the at least one [of said plurality of lights] light or varying the attitude of the wavelength selection element, and means for supplying information on the position or the attitude of the wavelength selection element with respect to the optical path of [said] the at least one light[, wherein]. The air flow rate of the air-cooling means is varied with respect to the display [element] elements modulating [said] the at least one light according [as] to whether the wavelength selection element is in the optical path of [said] the at



least one light or not or according to the attitude of the wavelength selection element in the optical path of [said] the at least one light.

The paragraph starting at page 10, line 5 and ending at line 9 has been amended as follows:

In a fourteenth aspect of the present invention, there is provided a display apparatus comprising a plurality of dichroic mirrors separating white light from a light source into [said] the plurality of lights of different colors consisting of red, green and blue.

The paragraph starting at page 10, line 17 and ending at line 22 has been amended as follows:

In a sixteenth aspect of the present invention, there is provided a display apparatus wherein [a display apparatus wherein said] the display elements include three pixel groups, respectively corresponding to the red, green and blue lights, and micro lens arrays condensing lights of the colors corresponding to three pixels of each group.

The paragraph starting at page 11, line 3 and ending at line 21 has been amended as follows:

In an eighteenth aspect of the present invention, there is provided a projection type display apparatus comprising image display elements, alight source for illuminating the image display elements, at least one first optical element for color-separating the light from the

light source into at least two color lights and causing them to impinge upon the image display elements, at least one second optical element for synthesizing the lights output from the image display elements into one, and a lens upon which the light from the at least one second optical element impinges and which projects the image displayed by the image display elements in an enlarged state[, wherein a]. A third optical element which transmits visible light of a wavelength shorter than that or vice versa, can be inserted or removed in or from the optical path between the at least one first optical element and the at least one second optical element, and [wherein] there is provided [a] means for supplying information as to whether the third optical element is in the optical path or not.

The paragraph starting at page 11, line 22 and ending at page 12, line 2 has been amended as follows:

In a nineteenth aspect of the present invention, there is provided a projection type display apparatus wherein the means for supplying information as to whether the third optical element is in the optical path or not consists of [a] means for detecting that the third optical element is in the optical path and indicating this by an indicating lamp.

The paragraph starting at page 12, line 3 and ending at line 23 has been amended as follows:

In a twentieth aspect of the present invention, there is provided a projection type display apparatus comprising image display elements, a light source for illuminating the

image display elements, a first optical element for color-separating the light from the light source into at least two color lights and causing them to impinge upon the image display elements, a second optical element for synthesizing the lights output from the image display elements into one, and a lens upon which the light from the second optical element impinges and which projects the image displayed by the image display elements in an enlarged state[, wherein a]. A third optical element which transmits visible light of a wavelength shorter than that or vice versa, can be inserted or removed in or from the optical path between the first optical element and the second optical element, and [wherein] there is provided [a] means for changing the cooling condition of the image display elements upon which a larger or smaller quantity of light impinges according to whether the third optical element is in the optical path or not.

The paragraph starting at page 21, line 8 and ending at line 14 has been amended as follows:

While in this embodiment the air flow rate of the fan is [increase] increased or decreased by controlling the speed of the fan, it is also possible to increase or decrease the air flow rate by providing a backup fan, which rotates when the color selection optical element is outside the optical path and does not rotate when the color selection optical element is in the optical path.

The paragraph starting at page 21, line 15 and ending at line 20 has been amended as follows:

While in the above-described embodiment the projection type display apparatus is controlled according to the flows of both Figs. 4 and 7, it is also possible, in the present invention, to provide two different projection display apparatuses that are controlled by the flow of either Fig. 4 or Fig. 7.

The paragraph starting at page 21, line 21 and ending at page 22, line 5 has been amended as follows:

Further, while in the projection type display apparatus of this embodiment an air cooling means is used as the means for cooling the image display elements, it is also possible to use a water cooling means for cooling the image display elements by a water cooling system, with the flow of the cooling fluid being varied according [as] to whether the color selection optical element is in the optical path or not (The flow rate is increased when the color selection optical element is in the optical path, and decreased when it is not).

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE ABSTRACT

The Abstract of the Disclosure section starting at page 33, line 2 and ending at line 14 has been amended as follows:

A display apparatus of the type which forms a color image by modulating a plurality of lights different from each other in color by one or [a plurality of] more display elements, includes a device for changing the color purity of at least one [of the plurality of lights] light by inserting or extracting a wavelength selection element into or out of the optical path of at least one of the plurality of lights, or changing the attitude of the wavelength selection element, and a device for supplying information as to whether the wavelength selection element is in the optical path of the at least one color light or information on the attitude of the wavelength selection element in the optical path of the at least one color light.

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. Cancelled.

2. (Amended) A display apparatus of the type which forms a color image by modulating a plurality of lights, different from each other in color, by one or more [a plurality of] display elements, said [the] display apparatus comprising:

means for changing the color purity of at least one light of [said] the plurality of lights by inserting or extracting a wavelength selection element into or out of the optical path of the at least one light [of said plurality of lights] or changing the attitude of [the] said wavelength selection element; [,] and

means for supplying information as to whether said [the] wavelength selection element is in the optical path of [said] the at least one [color] light or information on the attitude of [the] said wavelength selection element in the optical path of [said] the at least one [color] light.

3. (Amended) A display apparatus according to Claim 2, wherein said means for supplying information includes a display means formed by at least one of an LED[,]
and a liquid crystal device[, etc].

4. Cancelled.



5. (Amended) A display apparatus of the type which forms an image by modulating light by one or more [a plurality of] display elements, said display apparatus comprising:

cooling means for cooling the one or more display elements; and
means for varying the quantity of light impinging on the one or more [a plurality of said] display elements, wherein [the] a cooling capacity of said [the] cooling means with respect to the one or more [a plurality of said] display elements is varied according to a variation in the quantity of light.

6. (Amended) A display apparatus of the type which forms a color image by modulating a plurality of lights, different from each other in color, by one or more [a plurality of] display elements, said [the] display apparatus comprising:

cooling means for cooling the one or more display elements; and
means for obtaining a plurality of display forms by changing the color purity of at least one light of the [said] plurality of lights, wherein [the] a cooling capacity of said [the] cooling means is varied with respect to the one or more display elements modulating the [said] at least one light [of said plurality of lights] according to a variation in the color purity of the at least one light [of said plurality of lights].

7. (Amended) A display apparatus of the type which forms a color image by modulating a plurality of lights, different from each other in color, by one or more [a plurality of] display elements, said [the] display apparatus comprising:

cooling means for cooling the one or more display elements; and
means for varying the color purity of [said] at least one light of the plurality of lights by inserting or removing a wavelength selection element into [in] or from the optical path of the at least one [of said plurality of lights] light or varying the attitude of [the] said wavelength selection element, wherein a [the] cooling capacity of said [the] cooling means with respect to the one or more display elements modulating the [said] at least one light is varied according to [as] whether [the] said wavelength selection element is in the optical path of the [said] at least one light [or not] or according to a variation in the attitude of [the] said wavelength selection element in the optical path of the [said] at least one light.

8. (Amended) A display apparatus according to one of Claims [3, 4,] 5, 6 and 7, wherein said [the] cooling means is an air cooling type cooling means, wherein the variation in the cooling capacity is a [being] variation in an air flow rate with respect to the one or more display elements [element].

9. (Amended) A display apparatus according to one of Claims [3, 4,] 5, 6 and 7, wherein said [the] cooling means is a water cooling type cooling means, wherein the

variation in the cooling capacity is a [being] variation in a water flow rate with respect to the one or more display elements [element].

10. (Amended) A display apparatus of the type which forms a color image by modulating a plurality of lights, different from each other in color, by one or more [a plurality of] display elements, said [the] display apparatus comprising:

air cooling means for air cooling the one or more display elements;
means for varying the color purity of [said] at least one light of the plurality of lights by inserting or removing a wavelength selection element into [in] or from the optical path of the at least one light [of said plurality of lights] or varying the attitude of [the] said wavelength selection element; [,] and

means for supplying information on the position or the attitude of [the] said wavelength selection element with respect to the optical path of the [said] at least one light, wherein [the] an air flow rate of said [the] air-cooling means is varied with respect to the one or more display elements [element] modulating the [said] at least one light according to [as] whether [the] said wavelength selection element is in the optical path of the [said] at least one light [or not] or according to the attitude of [the] said wavelength selection element in the optical path of [said] the at least one light.

11. (Amended) A display apparatus according to one of Claims 2 and [3] 10, wherein said means for supplying information is provided with means for (i) detecting that

[the] said wavelength selection element is in the optical path of the [said] at least one light or that [it] said wavelength selection element is in a predetermined attitude and (ii) for lighting a lamp.

12. (Twice Amended) A display apparatus according to one of Claims 2, [3,] 7 and 10, wherein the wavelength selection element is an element which transmits visible light of a wavelength longer than a predetermined wavelength and blocks visible light of a wavelength shorter than that or an element which transmits visible light of a wavelength shorter than a predetermined wavelength and blocks visible light of a wavelength longer than that.

13. (Twice Amended) A display apparatus according to one of Claims 2, [3,] 7 and 10, wherein the wavelength selection element is an edge filter, a band pass filter or a band cut filter.

14. (Twice Amended) A display apparatus according to one of Claims [1,] 2, [4,] 5, 6, 7 and 10, further comprising a plurality of dichroic mirrors for separating white light from a light source into the [said] plurality of lights of different colors, wherein the plurality of lights of different colors consists of [consisting of] red, green and blue lights.

16. (Amended) A display apparatus according to Claim 14, [wherein a display apparatus] wherein the one or more [said] display elements include three pixel groups,

respectively corresponding to the red, green and blue lights, and a micro lens arrays condensing lights of the colors corresponding to the three pixels of each group.

17. (Twice Amended) A display apparatus according to one of Claims [1,] 2, [4,] 5, 6, 7 and 10, further comprising a projection lens for projecting the image of [the] display portions of the one or more display elements onto a screen[,] or a wall [or the like].

18. (Amended) A projection type display apparatus comprising:
image display elements; [,]
a light source for illuminating said [the] image display elements; [,]
at least one first optical element for color-separating the light from said [the] light source into at least two color lights and causing them to impinge upon said [the] image display elements; [,]
at least one second optical element for synthesizing the lights output from said [the] image display elements into one; [,] and
a lens upon which the light from said at least one [the] second optical element impinges and which projects the image displayed by said [the] image display elements in an enlarged state, wherein a third optical element which transmits visible light of a wavelength longer than a predetermined wavelength and blocks visible light of a wavelength shorter than that or vice versa, can be inserted into or removed [in or] from the optical path between [the] said at least one first optical element and [the] said at least one second optical element, and wherein

there is provided [a] means for supplying information as to whether said [the] third optical element is in the optical path [or not].

19. (Amended) A projection type display apparatus according to Claim 18, wherein [the] said means for supplying information as to whether said [the] third optical element is in the optical path [or not] consists of [a] means for detecting that said [the] third optical element is in the optical path and indicating this by an indicating lamp.

20. (Amended) A projection type display apparatus comprising:

image display elements; [,]

a light source for illuminating the image display elements; [,]

a first optical element for color-separating the light from said [the] light source into at least two color lights and causing them to impinge upon said [the] image display elements; [,]

a second optical element for synthesizing the lights output from said [the] image display elements into one; [,] and

a lens upon which the light from said [the] second optical element impinges and which projects the image displayed by said [the] image display elements in an enlarged state, wherein a third optical element which transmits visible light of a wavelength longer than a predetermined wavelength and blocks visible light of a wavelength shorter than that or vice versa, can be inserted into or removed [in or] from the optical path between said [the] first

optical element and said [the] second optical element, and wherein there is provided [a] means for changing [the] a cooling condition of said [the] image display elements upon which a larger or smaller quantity of light impinges according to [as] whether said [the] third optical element is in the optical path [or not].

21. (Amended) A projection type display apparatus according to Claim 20, wherein said means for changing the cooling [state consists of a] condition comprises [a] means for detecting if said [the] third optical element is in the optical path and reducing [the] an air flow rate of the cooling fan as compared to [the] a condition in which said [the] third optical element is not in the optical path.

22. (Twice Amended) An image processing apparatus comprising a display apparatus as claimed in one of Claims [1,] 2, [4,] 5, 6, 7, 10, 18 and 20 and a computer for inputting image information to said apparatus.